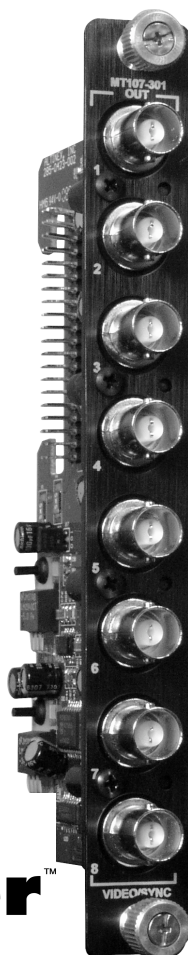


**Mult  
Tasker™**



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MANUAL PART NUMBER: 400-0353-001

**MT107-301/305/306**

**8 BNC OUTPUTS 450MHz  
VIDEO, SYNC/VIDEO, SYNC  
FOR MULTI-TASKER™ MATRIX SWITCHER  
USER'S GUIDE**

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## PRECAUTIONS / SAFETY WARNINGS 1

Please read this manual carefully before using your **MT107-301/305/306**. Keep this manual handy for future reference. These safety instructions are to ensure the long life of your **MT107-301/305/306** and to prevent fire and shock hazard. Please read them carefully and heed all warnings.

### 1.1 GENERAL

- Qualified ALTINEX service personnel, or their authorized representatives must perform all service.

### 1.2 INSTALLATION

- To prevent fire or shock, do not expose this unit to rain or moisture. Do not place the **MT107-301/305/306** in direct sunlight, near heaters or heat radiating appliances, or near any liquid. Exposure to direct sunlight, smoke, or steam can harm internal components.
- Handle the **MT107-301/305/306** carefully. Dropping or jarring can damage the card.
- Do not pull the cables that are attached to the **MT107-301/305/306**.
- Insert the card carefully into the slots of the Multi-Tasker™ without bending any edges.

### 1.3 CLEANING

- Clean only the connector area with a dry cloth. Never use strong detergents or solvents, such as alcohol or thinner. Do not use a wet cloth or water to clean the card. Do not clean or touch any component or PCB.

### 1.4 FCC / CE NOTICE

- This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

- This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.
- Any changes or modifications to the unit not expressly approved by ALTINEX, Inc. could void the user's authority to operate the equipment.

## ABOUT YOUR MT107-301/305/306 2

### MT107-301/305/306 8 BNC OUTPUTS 450MHz

The **MT107-301**, **MT107-305** and **MT107-306** are 8 BNC Output expansion cards for use with the **MT107-100** 64X64 Matrix Engine. All three cards are designed to work with signal resolutions from VGA through UXGA.

The **MT107-301** is capable of driving Video and/or SYNC signals. The **MT107-305** drives Video signals only and may be used with RGB, RGsB or Composite Video signals. The **MT107-306** is used for driving SYNC signals of any type and has a TTL output.

Each **MT107-301/305/306** connects to the **MT107-100** Matrix Engine. A total of 7 output expansion cards may be connected to the **MT107-100** Engine. Each card is connected via specially provided with the Engine high bandwidth video cables.

As part of the **MT107-100** Matrix Engine, each **MT107-301/305/306** card has signal detection circuitry, which allows to determine presence of signal on any output.

Altinex's software and hardware allow for the switching of any input to output combination and prevents illegal switching combinations that may damage components.

## TECHNICAL SPECIFICATIONS 3

FEATURES/ DESCRIPTION	MT107-301/305/306
<b>GENERAL</b>	
<b>Outputs</b>	8
Output Connectors	8 BNC Female
<b>Compatibility</b>	
Signal types	<b>-301:</b> RGBHV, RGBS, RGsB, Composite Video, Sync <b>-305:</b> Composite Video, RGB, RGsB <b>-306:</b> Sync
Signal resolution	VGA through UXGA

Table 1. **MT107-201** General

MECHANICAL	MT107-301/305/306
Enclosure Slots Required	1 Slot per Card
Weight	0.4 lb (0.2 kg)
Connector Panel	Black Anodized
T° Operating	10°C-50°C
T° Maximum	75°C
Humidity	90% non-condensing
MTBF (calc.)	38,000 hrs

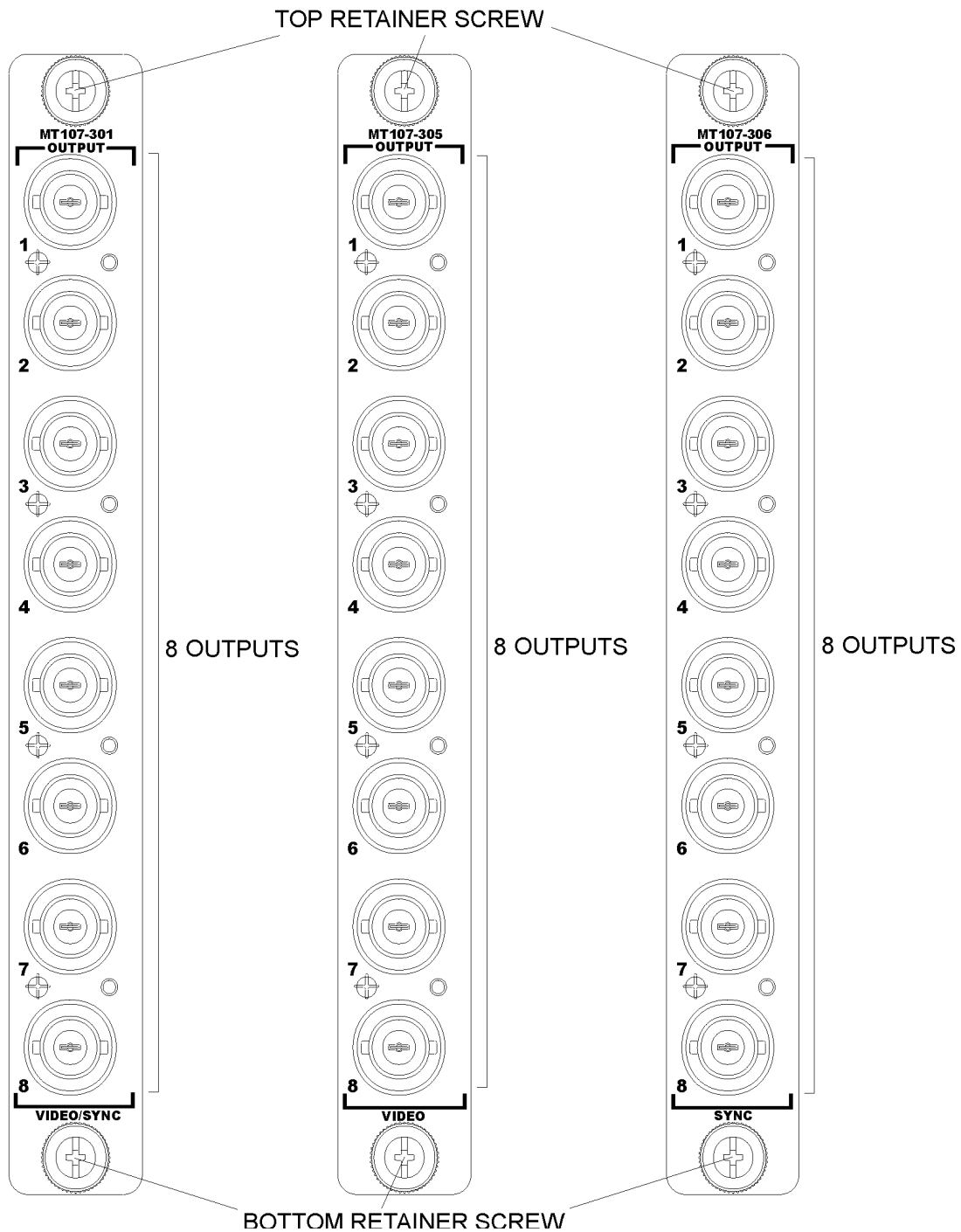
Table 2. **MT107-301/305/306** Mechanical

ELECTRICAL	MT107-301/305/306
<b>Video Output Signals</b>	R,G,B
Impedance Analog	75 Ohms
Analog Signal Level	1.5V p-p max.
<b>Sync Output Signals</b>	H,V
Signal Level	3 - 5 Volts TTL
<b>Bandwidth</b>	
Bandwidth	450 MHz @ -3dB

Table 3. **MT107-301/305/306** Electrical

## PRODUCT DESCRIPTION

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## APPLICATION DIAGRAM

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### DIAGRAM 1: TYPICAL CONFIGURATION

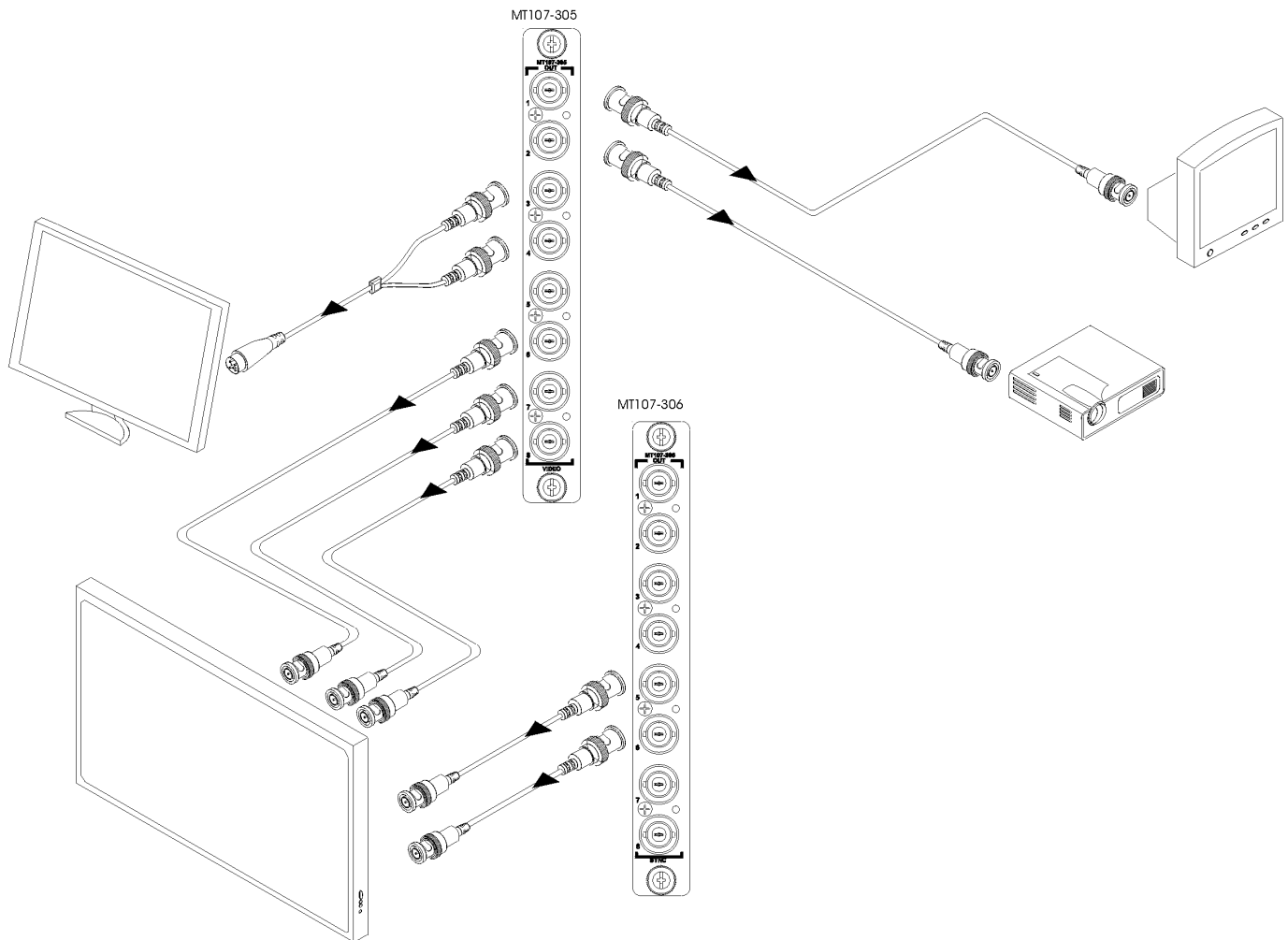


DIAGRAM 2 INTERNAL VIEW MT107-301

## MT107-301, 8 BNC OUTPUTS 450MHz, VIDEO/SYNC

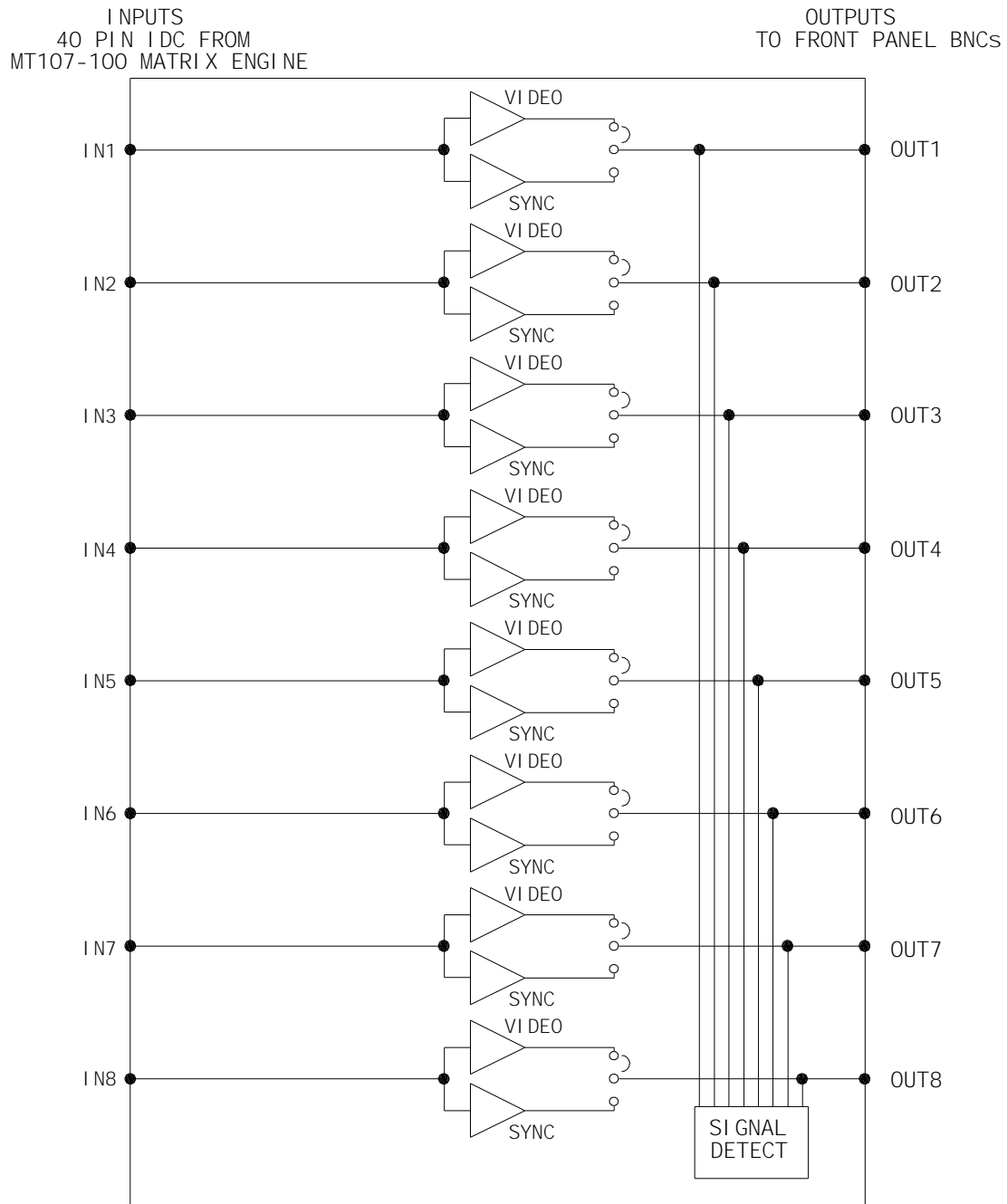


DIAGRAM 3 INTERNAL VIEW MT107-305

## MT107-305, 8 BNC OUTPUTS 450MHz, VIDEO

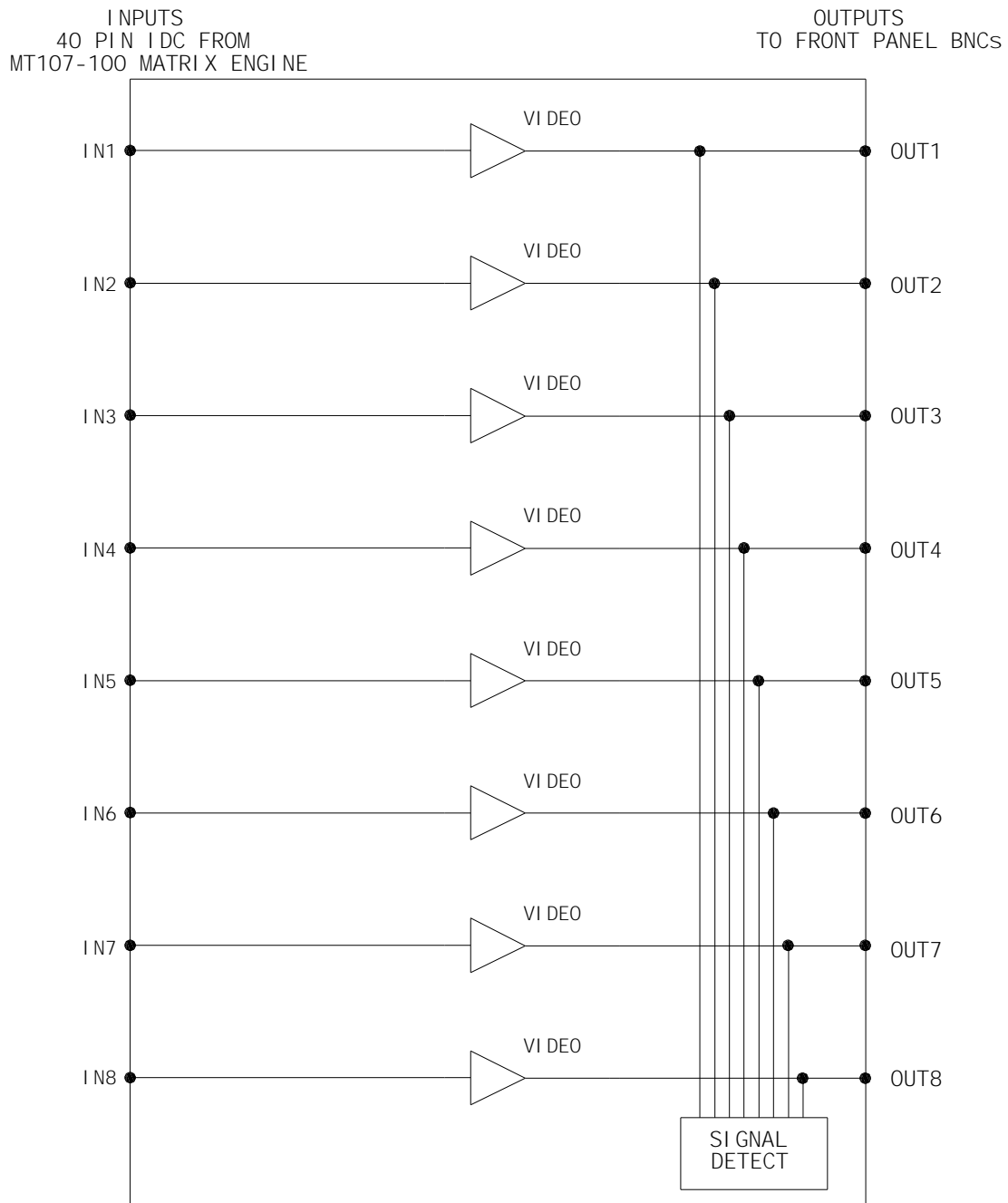
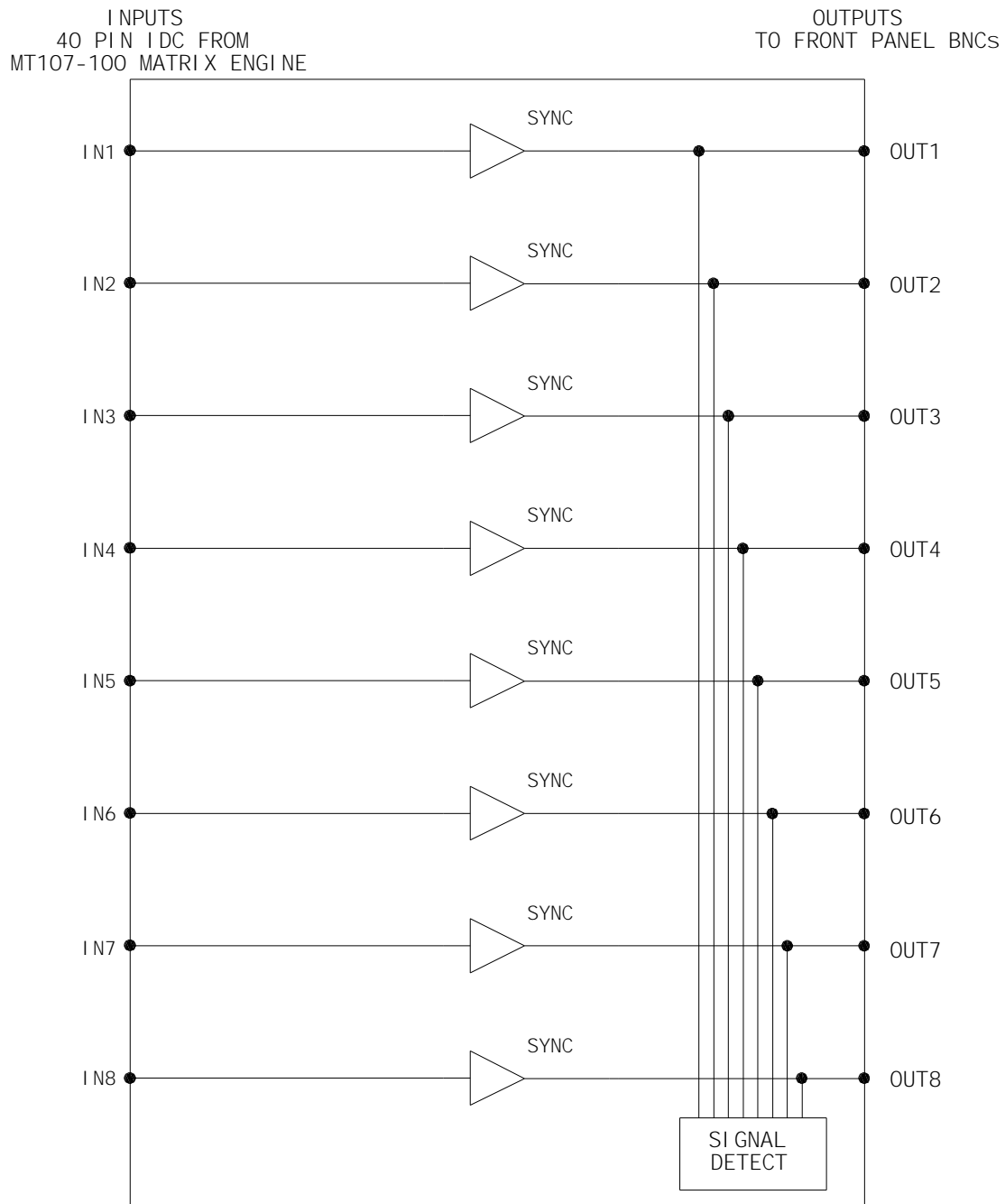




DIAGRAM 4 INTERNAL VIEW MT107-306

## MT107-306, 8 BNC OUTPUTS, SYNC



## INSTALLING YOUR MT107-301/305/306 6

- Step 1.** Locate the **MT107-100** currently installed in the Multi-Tasker™. Ensure there are enough empty slots in the enclosure to allow for the one or more **MT107-301/305/306**s to be installed.
- Step 2.** Route the ribbon cables through the notch in the add-on boards and connect to the **MT107-100** base assembly using special high bandwidth cables provided with the Engine. Make sure that cable connector is secured in the socket of the input card.
- Step 3.** Carefully, slide the **MT107-301/305/306** into slot of the Multi-Tasker™ Enclosure.
- Step 4.** Secure each card by tightening the retainer screws at the top and bottom of each card.

## OPERATION 7

### 7.1 RS-232 CONTROL

The **MT107-301/305/306** has many advanced remote control capabilities when used in the Multi-Tasker™ Enclosure as part of an **MT107-100** Matrix Switcher. These capabilities are accessible through standard RS-232 communication. The actual controlling can be accomplished through a computer control system or any other device capable of sending RS-232 commands.

### 7.2 DESCRIPTION OF COMMANDS

Please, see the **MT107-100** User's Guide for a full listing of commands available for the **MT107 301/305/306** as part of a Multi-Tasker™ Matrix Switcher.

## TROUBLESHOOTING GUIDE 8

We have carefully tested and have found no problems in the supplied **MT107-301/305/306**. However, we would like to offer suggestions for the following:

### 8.1 BAD SIGNAL

**Cause 1: The display is connected to the wrong card.**

**Solution:** Make sure the video signals are coming from the video card (-305) and sync signals are coming from the sync card (-306). If the signal is still bad, see Cause 2.

**Cause 2: The switch settings are wrong.**

**Solution:** If the output card is an **MT107-301**, make sure the Video/Sync switch settings are in the correct position for the signal type on each channel. If the signal is still bad, call Altinex at (714) 990-2300.

## 8.2 NO DISPLAY

### Cause 1: The source has a problem.

*Solution:* Check the source and make sure that there is a signal present and all source connections are correct. If the source is working and there is still no display, see Cause 2.

### Cause 2: The output signal is not detected.

*Solution 1:* In MTSetup™, or other control software, send the [SDO] command. This command is detailed in the **MT107-100's** User Guide. Verify a signal is detected for the output number in question. If a signal is not detected, see Solution 2.

*Solution 2:* Verify the **MT107-301/305/306** is connected to the **MT107-100** and that the cable is in good condition. If a signal is detected, see Cause 3. If there is no signal detected, please, call Altinex at (714) 990-2300.

### Cause 3: The path is not selected.

*Solution:* Make sure the input to output path is correctly selected.

For example, Input 1 is connected to Output 17 in the matrix engine. Physically, the source signal is connected to Input 1 and the display cable is connected to Output 17. See RS-232 accessible commands in Section 7 of the **MT100-107's** User Guide for command details.

If no display is present, see Cause 4.

### Cause 4: Cable connections are incorrect.

*Solution:* Make sure that cables are properly connected. Also, make sure that the continuity and wiring are good. If there is still no display present, see Cause 5.

### Cause 5: The display has a problem.

*Solution:* Make sure the display has power and is turned ON. If there is still no display, please call Altinex at (714) 990-2300.

## ALTINEX POLICY

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### 9.1 LIMITED WARRANTY/RETURN POLICY

Please see the Altinex website at [www.altinex.com](http://www.altinex.com) for details on warranty and return policy.

### 9.2 CONTACT INFORMATION

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Brea, CA 92821 USA

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**TOLL FREE:** 1-800-ALTINEX

**WEB:** [www.altinex.com](http://www.altinex.com)

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